

§ 77.603 Clamping of trailing cables to equipment.

Trailing cables shall be clamped to machines in a manner to protect the cables from damage and to prevent strain on the electrical connections.

§ 77.604 Protection of trailing cables.

Trailing cables shall be adequately protected to prevent damage by mobile equipment.

§ 77.605 Breaking trailing cable and power cable connections.

Trailing cable and power cable connections between cables and to power sources shall not be made or broken under load.

§ 77.606 Energized trailing cables; handling.

Energized medium- and high-voltage trailing cables shall be handled only by persons wearing protective rubber gloves (see § 77.606-1) and, with such other protective devices as may be necessary and appropriate under the circumstances.

§ 77.606-1 Rubber gloves; minimum requirements.

(a) Rubber gloves (lineman's gloves) worn while handling high-voltage trailing cables shall be rated at least 20,000 volts and shall be used and tested in accordance with the provisions of §§ 77.704-6 through 77.704-8.

(b) Rubber gloves (wireman's gloves) worn while handling trailing cables energized by 660 to 1,000 volts shall be rated at least 1,000 volts and shall not be worn inside out or without protective leather gloves.

(c) Rubber gloves shall be inspected for defects before use on each shift and at least once thereafter during the shift when such rubber gloves are used for extended periods. All protective rubber gloves which contain defects shall be discarded and replaced prior to handling energized cables.

Subpart H—Grounding

§ 77.700 Grounding metallic sheaths, armors, and conduits enclosing power conductors.

Metallic sheaths, armors, and conduits enclosing power conductors shall

be electrically continuous throughout and shall be grounded by methods approved by an authorized representative of the Secretary.

§ 77.700-1 Approved methods of grounding.

Metallic sheaths, armors, and conduits in resistance grounded systems, where the enclosed conductors are a part of the system, will be approved if a solid connection is made to the neutral conductor; in all other systems, the following methods of grounding will be approved:

(a) A solid connection to metal waterlines having low resistance to earth;

(b) A solid connection to a grounding conductor, other than the neutral conductor of a resistance grounded system, extending to a low-resistance ground field;

(c) Any other method of grounding, approved by an authorized representative of the Secretary, which ensures that there is no difference in potential between such metallic enclosures and the earth.

§ 77.701 Grounding metallic frames, casings, and other enclosures of electric equipment.

Metallic frames, casings, and other enclosures of electric equipment that can become "alive" through failure of insulation or by contact with energized parts shall be grounded by methods approved by an authorized representative of the Secretary.

§ 77.701-1 Approved methods of grounding of equipment receiving power from ungrounded alternating current power systems.

For purposes of grounding metallic frames, casings and other enclosures of equipment receiving power from ungrounded alternating current power systems, the following methods of grounding will be approved:

(a) A solid connection between the metallic frame; casing, or other metal enclosure and the grounded metallic sheath, armor, or conduit enclosing the power conductor feeding the electric equipment enclosed;

(b) A solid connection to metal waterlines having low resistance to earth;